

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-78127-1

Client Project/Site: Xcel Energy - Comanche

Revision: 1

For:

HDR Inc

9781 S. Meridian Blve

Suite 400

Englewood, Colorado 80112

Attn: Molly Reeves



Authorized for release by:

1/22/2016 10:43:02 AM

Stephanie Kupper, Project Manager I

(303)736-0182

stephanie.kupper@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1
2
3
4
5
6
7
8
9
10
11
12
13
14

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	8
Sample Summary	9
Client Sample Results	10
QC Sample Results	12
QC Association	18
Chronicle	21
Certification Summary	23
Chain of Custody	24
Receipt Checklists	25



Definitions/Glossary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Job ID: 280-78127-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: HDR Inc

Project: Xcel Energy - Comanche

Report Number: 280-78127-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/18/2015 at 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 4.9° C.

Sample W-3 (280-78127-1) was received with less than one shift (8 hours) remaining on the requested Nitrate analysis (48 hour sample holding time). It is TestAmerica's policy to analyze all samples within holding times; however, the laboratory cannot guarantee that hold times will be met when samples are received with less than half of the hold time remaining.

TOTAL METALS

Samples W-3 (280-78127-1), W-6 (280-78127-2), W-5 (280-78127-3) and POND (280-78127-4) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 12/29/2015 and analyzed on 01/07/2016.

Magnesium, Potassium and Sodium were detected in method blank MB 280-308940/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Magnesium failed the recovery criteria low for the MS of sample W-3 (280-78127-1) in batch 280-309957. Magnesium and Sodium failed the recovery criteria low for the MSD of sample W-3 (280-78127-1) in batch 280-309957. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples W-6 (280-78127-2)[2X] and W-5 (280-78127-3)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) associated with batch 280-309957 recovered above the upper control limit for Na. The method blank associated with this CCV was below 1/2 the RL for Na; therefore, the data have been reported.

The instrument blanks for analytical batch 280-309957 contained Na greater than one-half the reporting limit (RL), and were not re-analyzed because the sample results were greater than 10x the amount found in the CCB's or less than the RL. The data has been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY

Samples W-3 (280-78127-1), W-6 (280-78127-2), W-5 (280-78127-3) and POND (280-78127-4) were analyzed for Alkalinity in accordance

Case Narrative

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Job ID: 280-78127-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

with SM20 2320B. The samples were analyzed on 12/23/2015 and 12/24/2015.

Alkalinity was detected in method blank MB 280-308900/31 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Alkalinity and Carbonate Alkalinity as CaCO₃ were detected in method blank MB 280-309003/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL DISSOLVED SOLIDS

Samples W-3 (280-78127-1), W-6 (280-78127-2), W-5 (280-78127-3) and POND (280-78127-4) were analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 12/22/2015 and 12/24/2015.

The analysis volume selected for the following samples produced a base result greater than 200mg before calculation of the final result: W-3 (280-78127-1) and W-5 (280-78127-3). Reanalysis was performed and the results were within 10 percent of the relative percent difference in the original analysis. The reference method specifies that no more than 200mg of weight be recovered for a chosen sample analysis volume in order to produce the best data precision. As such, these data have been qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS

Samples W-3 (280-78127-1), W-6 (280-78127-2), W-5 (280-78127-3) and POND (280-78127-4) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 12/22/2015, 12/23/2015 and 12/24/2015.

Total Suspended Solids exceeded the RPD limit for the duplicate of sample 280-78323-5. Sample non-homogeneity is suspected. Both the parent sample and the duplicate were below the reporting limit, as such, the %RPD is not quantifiable. The data have been qualified.

The following samples were diluted due to slow filtration and high Total Suspended Solids: W-6 (280-78127-2), W-5 (280-78127-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (48 HOURS)

Samples W-3 (280-78127-1), W-6 (280-78127-2), W-5 (280-78127-3) and POND (280-78127-4) were analyzed for anions (48 hours) in accordance with EPA SW-846 Method 9056. The samples were analyzed on 12/18/2015.

Samples W-3 (280-78127-1)[5X], W-6 (280-78127-2)[20X] and W-5 (280-78127-3)[10X] required dilution prior to analysis due to the Matrix Conductivity Threshold (MCT) of the instrument. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (28 DAYS)

Samples W-3 (280-78127-1), W-6 (280-78127-2), W-5 (280-78127-3) and POND (280-78127-4) were analyzed for anions (28 days) in accordance with EPA SW-846 Method 9056A. The samples were analyzed on 12/18/2015, 12/19/2015 and 12/28/2015.

Chloride was detected in method blank MB 280-308253/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Samples W-3 (280-78127-1)[200X], W-3 (280-78127-1)[5X], W-6 (280-78127-2)[20X], W-6 (280-78127-2)[500X], W-5 (280-78127-3)[10X], W-5 (280-78127-3)[500X] and POND (280-78127-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Client Sample ID: W-3

Lab Sample ID: 280-78127-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Calcium	450000		200	35	ug/L	1			6010B	Total/NA
Copper	14	J	15	1.4	ug/L	1			6010B	Total/NA
Iron	2000		100	22	ug/L	1			6010B	Total/NA
Magnesium	950000	B	200	11	ug/L	1			6010B	Total/NA
Potassium	26000	B	3000	240	ug/L	1			6010B	Total/NA
Zinc	30		20	4.5	ug/L	1			6010B	Total/NA
Sodium	3200000	B	1000	92	ug/L	1			6010B	Total/NA
Nitrate as N	0.41	J	2.5	0.21	mg/L	5			9056	Total/NA
Chloride	250	B	15	1.3	mg/L	5			9056A	Total/NA
Sulfate	11000		1000	46	mg/L	200			9056A	Total/NA
Alkalinity	490	B	5.0	1.1	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	490		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Total Dissolved Solids (TDS)	15000	E	40	19	mg/L	1			SM 2540C	Total/NA
Total Suspended Solids	42		4.0	1.1	mg/L	1			SM 2540D	Total/NA

Client Sample ID: W-6

Lab Sample ID: 280-78127-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Calcium	410000		200	35	ug/L	1			6010B	Total/NA
Copper	25		15	1.4	ug/L	1			6010B	Total/NA
Iron	1300		200	44	ug/L	2			6010B	Total/NA
Magnesium	2800000	B	400	21	ug/L	2			6010B	Total/NA
Potassium	91000	B	3000	240	ug/L	1			6010B	Total/NA
Zinc	22		20	4.5	ug/L	1			6010B	Total/NA
Sodium	17000000	B	2000	180	ug/L	2			6010B	Total/NA
Nitrate as N	3.6	J	10	0.84	mg/L	20			9056	Total/NA
Chloride	880	B	60	5.1	mg/L	20			9056A	Total/NA
Sulfate	39000		2500	120	mg/L	500			9056A	Total/NA
Alkalinity	800		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	800		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Total Dissolved Solids (TDS)	69000		1000	470	mg/L	1			SM 2540C	Total/NA
Total Suspended Solids	680		40	11	mg/L	1			SM 2540D	Total/NA

Client Sample ID: W-5

Lab Sample ID: 280-78127-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Calcium	450000		200	35	ug/L	1			6010B	Total/NA
Copper	46		15	1.4	ug/L	1			6010B	Total/NA
Iron	13000		500	110	ug/L	5			6010B	Total/NA
Magnesium	4600000	B	1000	54	ug/L	5			6010B	Total/NA
Potassium	72000	B	3000	240	ug/L	1			6010B	Total/NA
Zinc	200		20	4.5	ug/L	1			6010B	Total/NA
Sodium	7400000	B	5000	460	ug/L	5			6010B	Total/NA
Nitrate as N	1.0	J	5.0	0.42	mg/L	10			9056	Total/NA
Chloride	860	B	30	2.5	mg/L	10			9056A	Total/NA
Sulfate	32000		2500	120	mg/L	500			9056A	Total/NA
Alkalinity	660		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	660		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Total Dissolved Solids (TDS)	64000	E	100	47	mg/L	1			SM 2540C	Total/NA
Total Suspended Solids	110		6.7	1.8	mg/L	1			SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Client Sample ID: POND

Lab Sample ID: 280-78127-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	110000		200	35	ug/L	1		6010B	Total/NA
Copper	4.8	J	15	1.4	ug/L	1		6010B	Total/NA
Iron	600		100	22	ug/L	1		6010B	Total/NA
Magnesium	28000	B	200	11	ug/L	1		6010B	Total/NA
Potassium	7500	B	3000	240	ug/L	1		6010B	Total/NA
Zinc	38		20	4.5	ug/L	1		6010B	Total/NA
Sodium	70000	B	1000	92	ug/L	1		6010B	Total/NA
Nitrate as N	0.53		0.50	0.042	mg/L	1		9056	Total/NA
Chloride	23	B	3.0	0.25	mg/L	1		9056A	Total/NA
Sulfate	300		25	1.2	mg/L	5		9056A	Total/NA
Alkalinity	110	B	5.0	1.1	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	100		5.0	1.1	mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	4.5	J B	5.0	1.1	mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids (TDS)	660		10	4.7	mg/L	1		SM 2540C	Total/NA
Total Suspended Solids	26		4.0	1.1	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL DEN
9056	Anions, Ion Chromatography	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-78127-1	W-3	Ground Water	12/16/15 14:50	12/18/15 09:40
280-78127-2	W-6	Ground Water	12/17/15 10:35	12/18/15 09:40
280-78127-3	W-5	Ground Water	12/17/15 12:05	12/18/15 09:40
280-78127-4	POND	Water	12/17/15 12:50	12/18/15 09:40

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method: 6010B - Metals (ICP)

Client Sample ID: W-3
Date Collected: 12/16/15 14:50
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	450000		200	35	ug/L		12/29/15 13:45	01/07/16 20:54	1
Copper	14	J	15	1.4	ug/L		12/29/15 13:45	01/07/16 06:22	1
Iron	2000		100	22	ug/L		12/29/15 13:45	01/07/16 20:54	1
Magnesium	950000	B	200	11	ug/L		12/29/15 13:45	01/07/16 06:22	1
Potassium	26000	B	3000	240	ug/L		12/29/15 13:45	01/07/16 20:54	1
Zinc	30		20	4.5	ug/L		12/29/15 13:45	01/07/16 06:22	1
Sodium	3200000	B	1000	92	ug/L		12/29/15 13:45	01/07/16 20:54	1

Client Sample ID: W-6
Date Collected: 12/17/15 10:35
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	410000		200	35	ug/L		12/29/15 13:45	01/07/16 21:17	1
Copper	25		15	1.4	ug/L		12/29/15 13:45	01/07/16 06:35	1
Iron	1300		200	44	ug/L		12/29/15 13:45	01/07/16 21:21	2
Magnesium	2800000	B	400	21	ug/L		12/29/15 13:45	01/07/16 21:21	2
Potassium	91000	B	3000	240	ug/L		12/29/15 13:45	01/07/16 21:17	1
Zinc	22		20	4.5	ug/L		12/29/15 13:45	01/07/16 06:35	1
Sodium	17000000	B	2000	180	ug/L		12/29/15 13:45	01/07/16 21:21	2

Client Sample ID: W-5
Date Collected: 12/17/15 12:05
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	450000		200	35	ug/L		12/29/15 13:45	01/07/16 21:24	1
Copper	46		15	1.4	ug/L		12/29/15 13:45	01/07/16 06:38	1
Iron	13000		500	110	ug/L		12/29/15 13:45	01/07/16 21:27	5
Magnesium	4600000	B	1000	54	ug/L		12/29/15 13:45	01/07/16 21:27	5
Potassium	72000	B	3000	240	ug/L		12/29/15 13:45	01/07/16 21:24	1
Zinc	200		20	4.5	ug/L		12/29/15 13:45	01/07/16 06:38	1
Sodium	7400000	B	5000	460	ug/L		12/29/15 13:45	01/07/16 21:27	5

Client Sample ID: POND
Date Collected: 12/17/15 12:50
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110000		200	35	ug/L		12/29/15 13:45	01/07/16 21:31	1
Copper	4.8	J	15	1.4	ug/L		12/29/15 13:45	01/07/16 06:42	1
Iron	600		100	22	ug/L		12/29/15 13:45	01/07/16 21:31	1
Magnesium	28000	B	200	11	ug/L		12/29/15 13:45	01/07/16 06:42	1
Potassium	7500	B	3000	240	ug/L		12/29/15 13:45	01/07/16 21:31	1
Zinc	38		20	4.5	ug/L		12/29/15 13:45	01/07/16 06:42	1
Sodium	70000	B	1000	92	ug/L		12/29/15 13:45	01/07/16 21:31	1

TestAmerica Denver

Client Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

General Chemistry

Client Sample ID: W-3
Date Collected: 12/16/15 14:50
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-1
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.41	J	2.5	0.21	mg/L			12/18/15 12:07	5
Chloride	250	B	15	1.3	mg/L			12/18/15 12:07	5
Sulfate	11000		1000	46	mg/L			12/28/15 22:42	200
Alkalinity	490	B	5.0	1.1	mg/L			12/23/15 16:49	1
Bicarbonate Alkalinity as CaCO3	490		5.0	1.1	mg/L			12/23/15 16:49	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 16:49	1
Total Dissolved Solids (TDS)	15000	E	40	19	mg/L			12/22/15 07:31	1
Total Suspended Solids	42		4.0	1.1	mg/L			12/22/15 15:44	1

Client Sample ID: W-6
Date Collected: 12/17/15 10:35
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-2
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.6	J	10	0.84	mg/L			12/18/15 12:27	20
Chloride	880	B	60	5.1	mg/L			12/18/15 12:27	20
Sulfate	39000		2500	120	mg/L			12/19/15 02:28	500
Alkalinity	800		5.0	1.1	mg/L			12/23/15 14:30	1
Bicarbonate Alkalinity as CaCO3	800		5.0	1.1	mg/L			12/23/15 14:30	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 14:30	1
Total Dissolved Solids (TDS)	69000		1000	470	mg/L			12/24/15 13:00	1
Total Suspended Solids	680		40	11	mg/L			12/24/15 14:54	1

Client Sample ID: W-5
Date Collected: 12/17/15 12:05
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-3
Matrix: Ground Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	1.0	J	5.0	0.42	mg/L			12/18/15 12:47	10
Chloride	860	B	30	2.5	mg/L			12/18/15 12:47	10
Sulfate	32000		2500	120	mg/L			12/19/15 02:48	500
Alkalinity	660		5.0	1.1	mg/L			12/23/15 14:35	1
Bicarbonate Alkalinity as CaCO3	660		5.0	1.1	mg/L			12/23/15 14:35	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 14:35	1
Total Dissolved Solids (TDS)	64000	E	100	47	mg/L			12/22/15 07:31	1
Total Suspended Solids	110		6.7	1.8	mg/L			12/23/15 15:28	1

Client Sample ID: POND
Date Collected: 12/17/15 12:50
Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.53		0.50	0.042	mg/L			12/18/15 13:07	1
Chloride	23	B	3.0	0.25	mg/L			12/18/15 13:07	1
Sulfate	300		25	1.2	mg/L			12/19/15 03:08	5
Alkalinity	110	B	5.0	1.1	mg/L			12/24/15 13:33	1
Bicarbonate Alkalinity as CaCO3	100		5.0	1.1	mg/L			12/24/15 13:33	1
Carbonate Alkalinity as CaCO3	4.5	J B	5.0	1.1	mg/L			12/24/15 13:33	1
Total Dissolved Solids (TDS)	660		10	4.7	mg/L			12/22/15 07:31	1
Total Suspended Solids	26		4.0	1.1	mg/L			12/23/15 15:28	1

TestAmerica Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-308940/1-A
Matrix: Water
Analysis Batch: 309813

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308940

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		15	1.4	ug/L		12/29/15 13:45	01/07/16 06:17	1
Magnesium	13.6	J	200	11	ug/L		12/29/15 13:45	01/07/16 06:17	1
Zinc	ND		20	4.5	ug/L		12/29/15 13:45	01/07/16 06:17	1

Lab Sample ID: MB 280-308940/1-A
Matrix: Water
Analysis Batch: 309957

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308940

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		200	35	ug/L		12/29/15 13:45	01/07/16 20:49	1
Iron	ND		100	22	ug/L		12/29/15 13:45	01/07/16 20:49	1
Potassium	344	J	3000	240	ug/L		12/29/15 13:45	01/07/16 20:49	1
Sodium	469	J ^	1000	92	ug/L		12/29/15 13:45	01/07/16 20:49	1

Lab Sample ID: LCS 280-308940/2-A
Matrix: Water
Analysis Batch: 309813

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	250	254		ug/L		102	86 - 112
Magnesium	50000	46200		ug/L		92	90 - 113
Zinc	500	450		ug/L		90	85 - 111

Lab Sample ID: LCS 280-308940/2-A
Matrix: Water
Analysis Batch: 309957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	48600		ug/L		97	90 - 111
Iron	1000	1000		ug/L		100	89 - 115
Potassium	50000	52600		ug/L		105	89 - 114
Sodium	50000	54400		ug/L		109	90 - 115

Lab Sample ID: 280-78127-1 MS
Matrix: Ground Water
Analysis Batch: 309813

Client Sample ID: W-3
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	14	J	250	272		ug/L		103	82 - 129
Magnesium	950000	B	50000	960000	4	ug/L		19	62 - 146
Zinc	30		500	460		ug/L		86	60 - 137

Lab Sample ID: 280-78127-1 MS
Matrix: Ground Water
Analysis Batch: 309957

Client Sample ID: W-3
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	450000		50000	498000	4	ug/L		86	48 - 153
Iron	2000		1000	2910		ug/L		89	52 - 155

TestAmerica Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 280-78127-1 MS
Matrix: Ground Water
Analysis Batch: 309957

Client Sample ID: W-3
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	26000	B	50000	85400		ug/L		118	76 - 132
Sodium	3200000	B	50000	3220000	4	ug/L		80	70 - 203

Lab Sample ID: 280-78127-1 MSD
Matrix: Ground Water
Analysis Batch: 309813

Client Sample ID: W-3
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Copper	14	J	250	272		ug/L		103	82 - 129	0	20
Magnesium	950000	B	50000	937000	4	ug/L		-27	62 - 146	2	20
Zinc	30		500	454		ug/L		85	60 - 137	1	20

Lab Sample ID: 280-78127-1 MSD
Matrix: Ground Water
Analysis Batch: 309957

Client Sample ID: W-3
Prep Type: Total/NA
Prep Batch: 308940

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Calcium	450000		50000	483000	4	ug/L		57	48 - 153	3	20
Iron	2000		1000	2720		ug/L		70	52 - 155	7	20
Potassium	26000	B	50000	84300		ug/L		116	76 - 132	1	20
Sodium	3200000	B	50000	3120000	4	ug/L		-113	70 - 203	3	20

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 280-308252/6
Matrix: Water
Analysis Batch: 308252

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.042	mg/L			12/18/15 11:32	1

Lab Sample ID: LCS 280-308252/4
Matrix: Water
Analysis Batch: 308252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.85		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-308252/5
Matrix: Water
Analysis Batch: 308252

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Nitrate as N	5.00	4.85		mg/L		97	90 - 110	0	10

TestAmerica Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-308252/3

Matrix: Water

Analysis Batch: 308252

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.200	0.226	J	mg/L		113	50 - 150

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-308253/6

Matrix: Water

Analysis Batch: 308253

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.640	J	3.0	0.25	mg/L			12/18/15 11:32	1
Sulfate	ND		5.0	0.23	mg/L			12/18/15 11:32	1

Lab Sample ID: LCS 280-308253/4

Matrix: Water

Analysis Batch: 308253

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	96.6		mg/L		97	90 - 110
Sulfate	100	93.2		mg/L		93	90 - 110

Lab Sample ID: LCSD 280-308253/5

Matrix: Water

Analysis Batch: 308253

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	96.6		mg/L		97	90 - 110	0	10
Sulfate	100	93.2		mg/L		93	90 - 110	0	10

Lab Sample ID: MRL 280-308253/3

Matrix: Water

Analysis Batch: 308253

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.50	2.34	J	mg/L		94	50 - 150
Sulfate	2.50	2.41	J	mg/L		97	50 - 150

Lab Sample ID: MB 280-308992/6

Matrix: Water

Analysis Batch: 308992

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		5.0	0.23	mg/L			12/28/15 12:58	1

Lab Sample ID: LCS 280-308992/4

Matrix: Water

Analysis Batch: 308992

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	100	97.3		mg/L		97	90 - 110

TestAmerica Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-308992/5

Matrix: Water

Analysis Batch: 308992

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	100	97.4		mg/L		97	90 - 110	0	10

Lab Sample ID: MRL 280-308992/3

Matrix: Water

Analysis Batch: 308992

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	2.50	2.60	J	mg/L		104	50 - 150		

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-308877/6

Matrix: Water

Analysis Batch: 308877

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		5.0	1.1	mg/L			12/23/15 13:25	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 13:25	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 13:25	1

Lab Sample ID: LCS 280-308877/4

Matrix: Water

Analysis Batch: 308877

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity	200	204		mg/L		102	90 - 110		

Lab Sample ID: LCSD 280-308877/5

Matrix: Water

Analysis Batch: 308877

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	200	205		mg/L		103	90 - 110	0	10

Lab Sample ID: MB 280-308900/31

Matrix: Water

Analysis Batch: 308900

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	1.98	J	5.0	1.1	mg/L			12/23/15 14:37	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 14:37	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/23/15 14:37	1

Lab Sample ID: LCS 280-308900/30

Matrix: Water

Analysis Batch: 308900

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity	200	201		mg/L		100	90 - 110		

TestAmerica Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 280-309003/5

Matrix: Water

Analysis Batch: 309003

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	3.15	J	5.0	1.1	mg/L			12/24/15 12:08	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			12/24/15 12:08	1
Carbonate Alkalinity as CaCO3	3.14	J	5.0	1.1	mg/L			12/24/15 12:08	1

Lab Sample ID: LCS 280-309003/4

Matrix: Water

Analysis Batch: 309003

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	201		mg/L		100	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 280-308578/1

Matrix: Water

Analysis Batch: 308578

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/22/15 07:31	1

Lab Sample ID: LCS 280-308578/2

Matrix: Water

Analysis Batch: 308578

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	501	499		mg/L		100	86 - 110

Lab Sample ID: MB 280-308960/1

Matrix: Water

Analysis Batch: 308960

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (TDS)	ND		10	4.7	mg/L			12/24/15 13:00	1

Lab Sample ID: LCS 280-308960/2

Matrix: Water

Analysis Batch: 308960

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids (TDS)	500	499		mg/L		100	86 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-308676/2

Matrix: Water

Analysis Batch: 308676

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/22/15 15:44	1

TestAmerica Denver

QC Sample Results

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Lab Sample ID: LCS 280-308676/1
Matrix: Water
Analysis Batch: 308676

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	92.0		mg/L		92	86 - 114

Lab Sample ID: 280-78127-1 DU
Matrix: Ground Water
Analysis Batch: 308676

Client Sample ID: W-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	42		45.6		mg/L		9	10

Lab Sample ID: MB 280-308845/2
Matrix: Water
Analysis Batch: 308845

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/23/15 15:28	1

Lab Sample ID: LCS 280-308845/1
Matrix: Water
Analysis Batch: 308845

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	92.0		mg/L		92	86 - 114

Lab Sample ID: MB 280-308967/2
Matrix: Water
Analysis Batch: 308967

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/24/15 14:54	1

Lab Sample ID: LCS 280-308967/1
Matrix: Water
Analysis Batch: 308967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	100	90.4		mg/L		90	86 - 114

TestAmerica Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Metals

Prep Batch: 308940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	3010A	
280-78127-1 MS	W-3	Total/NA	Ground Water	3010A	
280-78127-1 MSD	W-3	Total/NA	Ground Water	3010A	
280-78127-2	W-6	Total/NA	Ground Water	3010A	
280-78127-3	W-5	Total/NA	Ground Water	3010A	
280-78127-4	POND	Total/NA	Water	3010A	
LCS 280-308940/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 280-308940/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 309813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	6010B	308940
280-78127-1 MS	W-3	Total/NA	Ground Water	6010B	308940
280-78127-1 MSD	W-3	Total/NA	Ground Water	6010B	308940
280-78127-2	W-6	Total/NA	Ground Water	6010B	308940
280-78127-3	W-5	Total/NA	Ground Water	6010B	308940
280-78127-4	POND	Total/NA	Water	6010B	308940
LCS 280-308940/2-A	Lab Control Sample	Total/NA	Water	6010B	308940
MB 280-308940/1-A	Method Blank	Total/NA	Water	6010B	308940

Analysis Batch: 309957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	6010B	308940
280-78127-1 MS	W-3	Total/NA	Ground Water	6010B	308940
280-78127-1 MSD	W-3	Total/NA	Ground Water	6010B	308940
280-78127-2	W-6	Total/NA	Ground Water	6010B	308940
280-78127-2	W-6	Total/NA	Ground Water	6010B	308940
280-78127-3	W-5	Total/NA	Ground Water	6010B	308940
280-78127-3	W-5	Total/NA	Ground Water	6010B	308940
280-78127-4	POND	Total/NA	Water	6010B	308940
LCS 280-308940/2-A	Lab Control Sample	Total/NA	Water	6010B	308940
MB 280-308940/1-A	Method Blank	Total/NA	Water	6010B	308940

General Chemistry

Analysis Batch: 308252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	9056	
280-78127-2	W-6	Total/NA	Ground Water	9056	
280-78127-3	W-5	Total/NA	Ground Water	9056	
280-78127-4	POND	Total/NA	Water	9056	
LCS 280-308252/4	Lab Control Sample	Total/NA	Water	9056	
LCSD 280-308252/5	Lab Control Sample Dup	Total/NA	Water	9056	
MB 280-308252/6	Method Blank	Total/NA	Water	9056	
MRL 280-308252/3	Lab Control Sample	Total/NA	Water	9056	

Analysis Batch: 308253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	9056A	
280-78127-2	W-6	Total/NA	Ground Water	9056A	

TestAmerica Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

General Chemistry (Continued)

Analysis Batch: 308253 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-2	W-6	Total/NA	Ground Water	9056A	
280-78127-3	W-5	Total/NA	Ground Water	9056A	
280-78127-3	W-5	Total/NA	Ground Water	9056A	
280-78127-4	POND	Total/NA	Water	9056A	
280-78127-4	POND	Total/NA	Water	9056A	
LCS 280-308253/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-308253/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MB 280-308253/6	Method Blank	Total/NA	Water	9056A	
MRL 280-308253/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 308578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	SM 2540C	
280-78127-3	W-5	Total/NA	Ground Water	SM 2540C	
280-78127-4	POND	Total/NA	Water	SM 2540C	
LCS 280-308578/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 280-308578/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 308676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	SM 2540D	
280-78127-1 DU	W-3	Total/NA	Ground Water	SM 2540D	
LCS 280-308676/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 280-308676/2	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 308845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-3	W-5	Total/NA	Ground Water	SM 2540D	
280-78127-4	POND	Total/NA	Water	SM 2540D	
LCS 280-308845/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 280-308845/2	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 308877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-2	W-6	Total/NA	Ground Water	SM 2320B	
280-78127-3	W-5	Total/NA	Ground Water	SM 2320B	
LCS 280-308877/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-308877/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 280-308877/6	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 308900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	SM 2320B	
LCS 280-308900/30	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 280-308900/31	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 308960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-2	W-6	Total/NA	Ground Water	SM 2540C	
LCS 280-308960/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 280-308960/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Denver

QC Association Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Analysis Batch: 308967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-2	W-6	Total/NA	Ground Water	SM 2540D	
LCS 280-308967/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 280-308967/2	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 308992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-1	W-3	Total/NA	Ground Water	9056A	
LCS 280-308992/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-308992/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MB 280-308992/6	Method Blank	Total/NA	Water	9056A	
MRL 280-308992/3	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 309003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-78127-4	POND	Total/NA	Water	SM 2320B	
LCS 280-309003/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 280-309003/5	Method Blank	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Client Sample ID: W-3

Date Collected: 12/16/15 14:50

Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309813	01/07/16 06:22	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309957	01/07/16 20:54	CRR	TAL DEN
Total/NA	Analysis	9056		5	5 mL	5 mL	308252	12/18/15 12:07	AFB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	308253	12/18/15 12:07	AFB	TAL DEN
Total/NA	Analysis	9056A		200	5 mL	5 mL	308992	12/28/15 22:42	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			308900	12/23/15 16:49	NAS	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	308578	12/22/15 07:31	WTW	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	308676	12/22/15 15:44	MW1	TAL DEN

Client Sample ID: W-6

Date Collected: 12/17/15 10:35

Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309813	01/07/16 06:35	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309957	01/07/16 21:17	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		2	50 mL	50 mL	309957	01/07/16 21:21	CRR	TAL DEN
Total/NA	Analysis	9056		20	5 mL	5 mL	308252	12/18/15 12:27	AFB	TAL DEN
Total/NA	Analysis	9056A		20	5 mL	5 mL	308253	12/18/15 12:27	AFB	TAL DEN
Total/NA	Analysis	9056A		500	5 mL	5 mL	308253	12/19/15 02:28	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			308877	12/23/15 14:30	NAS	TAL DEN
Total/NA	Analysis	SM 2540C		1	1 mL	100 mL	308960	12/24/15 13:00	RSM	TAL DEN
Total/NA	Analysis	SM 2540D		1	25 mL	250 mL	308967	12/24/15 14:54	MW1	TAL DEN

Client Sample ID: W-5

Date Collected: 12/17/15 12:05

Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309813	01/07/16 06:38	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309957	01/07/16 21:24	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		5	50 mL	50 mL	309957	01/07/16 21:27	CRR	TAL DEN
Total/NA	Analysis	9056		10	5 mL	5 mL	308252	12/18/15 12:47	AFB	TAL DEN
Total/NA	Analysis	9056A		10	5 mL	5 mL	308253	12/18/15 12:47	AFB	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		500	5 mL	5 mL	308253	12/19/15 02:48	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			308877	12/23/15 14:35	NAS	TAL DEN
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	308578	12/22/15 07:31	WTW	TAL DEN
Total/NA	Analysis	SM 2540D		1	150 mL	250 mL	308845	12/23/15 15:28	MW1	TAL DEN

Client Sample ID: POND

Date Collected: 12/17/15 12:50

Date Received: 12/18/15 09:40

Lab Sample ID: 280-78127-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309813	01/07/16 06:42	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	308940	12/29/15 13:45	MLS	TAL DEN
Total/NA	Analysis	6010B		1	50 mL	50 mL	309957	01/07/16 21:31	CRR	TAL DEN
Total/NA	Analysis	9056		1	5 mL	5 mL	308252	12/18/15 13:07	AFB	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	308253	12/18/15 13:07	AFB	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	308253	12/19/15 03:08	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			309003	12/24/15 13:33	NAS	TAL DEN
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	308578	12/22/15 07:31	WTW	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	308845	12/23/15 15:28	MW1	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: HDR Inc
Project/Site: Xcel Energy - Comanche

TestAmerica Job ID: 280-78127-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
9056		Ground Water	Nitrate as N
9056		Water	Nitrate as N
9056A		Ground Water	Chloride
9056A		Ground Water	Sulfate
9056A		Water	Chloride
9056A		Water	Sulfate

Chain of Custody Record

Client Information				Analysis Requested				Special Instructions/Note:																																											
Lab PM: Kupper, Stephanie K				Carrier Tracking No(s):				COC No:																																											
E-Mail: stephanie.kupper@testamericainc.com				Page 1 of 1				Job #:																																											
Due Date Requested: TAT Requested (days): Standard PO #: DEN-001 WO #: Project #: 28014376 SSOW#:				Sample Identification Sample Date Sample Time Sample Type (G=grab, B=BT-Tissue, A=Air) Matrix (W=water, S=solid, O=oil) Preservation Code:				Field Filtered Sample (Yes or No) Alkalinity - 2320B, Anions - 9056 - Nitrate/Chloride/Sulfate 6010B - Total Metals - ICP - Ca, Mg, Na, K, Fe, Cu, Zn 2540C - Caled - Total Dissolved Solids (TDS) 2540D - Total Suspended Solids				Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 P - Na2OAS D - Nitric Acid Q - Na2SO3 E - NaHSO4 R - MeOH F - Na2SO4 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone V - MCAA J - DI Water K - EDTA W - ph 4-5 L - EDA Z - other (specify) Other:																																							
Address: 9781 S. Meridian Blvd Suite 400 City: Englewood State, Zip: CO, 80112 Phone: Email: anna.lundin@hdrinc.com Project Name: Xcel Energy - Comanche Site: Colorado				Sample Identification W-3 W-6 W-8 POND				Sample Date 12/14/15 12/17/15 12/17/15 12/17/15				Sample Time 1450 1035 1205 1250				Sample Type (G=grab, B=BT-Tissue, A=Air) Water W W W				Matrix (W=water, S=solid, O=oil) W W W W				Field Filtered Sample (Yes or No) N N N N				Alkalinity - 2320B, Anions - 9056 - Nitrate/Chloride/Sulfate X X X X				6010B - Total Metals - ICP - Ca, Mg, Na, K, Fe, Cu, Zn X X X X				2540C - Caled - Total Dissolved Solids (TDS) X X X X				2540D - Total Suspended Solids X X X X				Total Number of containers 6 6 6 6				Special Instructions/Note:			
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				Deliverable Requested: I, II, III, IV, Other (specify)				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				Special Instructions/QC Requirements:																																							
Empty Kit Relinquished by:				Date: 12/18/15				Company: HDR				Received by:				Date/Time: 12/18/15 9:46				Company:																															
Relinquished by:				Date/Time:				Company:				Received by:				Date/Time:				Company:																															
Relinquished by:				Date/Time:				Company:				Received by:				Date/Time:				Company:																															
Custody Seals Intact: A Yes A No				Custody Seal No.:				Relinquished by:				Date/Time:				Company:																																			

Login Sample Receipt Checklist

Client: HDR Inc

Job Number: 280-78127-1

Login Number: 78127

List Number: 1

Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	Limited time remaining for Nitrate analysis (expires day of receipt).
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	